

218-D1 18107

Fundamentals of Math II
Dr Matthew Sunderland

1. Synchronous lecture Monday Wednesday 10:10–12:05
<https://zoom.us/meeting/register/tJYkc-uqrzosE9UBkIRQ7svOwjLpKyIMXZhV>
2. Online problem sets due Sundays
https://www.math.csi.cuny.edu/webwork2/Math218_18188_Sunderland_F20/
Both username and password are your CUNY username,
eg, **username first.last00 password first.last00**, all lowercase (*not* jsmith5678)
3. Written assignments due some Sundays on
<https://www.gradescope.com> course code 9NKJEY
4. Reading assignments due each night before lecture
Mathematics for Elementary School Teachers With Activities 5e by Beckman (Pearson)
5. Office hours **[as of 8/3] Mon 5p–6p, Thu 11a–12p, Fri 2p–3p**
<https://zoom.us/my/mattsunderland>
6. Announcements, Lecture Recordings, and Grades posted on
<https://bbhosted.cuny.edu>
7. Platform for administering exams TBD,
possibly Blackboard, Gradescope, WeBWorK, Respondus, or Proctortrack
8. **Tutoring available at**
<https://www.csi.cuny.edu/students/academic-assistance/tutoring>

Day 1 Homework

1. Download Zoom and create free account
2. Do Online Problem Set 1 by Sunday 8/30
3. Submit Written Assignment 1 by Sunday 8/30—see last two pages of syllabus
4. Do first reading assignment (Section 10.1) by Sunday 8/30
5. Do office hour survey <https://forms.gle/RRf74atLQkR3kg5DA>

$$\text{Course Grade} = \text{Average of} \left\{ \begin{array}{l} \text{Coursework} \\ \text{Exam 1} \\ \text{Exam 2} \\ \text{Final} \end{array} \right\} \left\{ \begin{array}{l} 1. \text{Lecture participation} \\ 2. \text{Online problem sets} \\ 3. \text{Written assignments} \end{array} \right.$$

Lecture Recording Statement *Students who participate in this class with their camera on or use a profile image are agreeing to have their video or image recorded solely for the purpose of creating a record for students enrolled in the class to refer to, including those enrolled students who are unable to attend live. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the “chat” feature, which allows students to type questions and comments live.*

Deadlines Add 9/1 Drop 9/15 Withdraw 11/6

MTH/SLS 218 Syllabus

Mathematics for Elementary School Teachers

With Activities

Text: Beckman, 5th Edition, 2017, Pearson. CSI Math Department 2017. L Blois

Required materials include a Calculator, a Compass and a Straight Edge

Day	Section & Reading assignments in the in Text	Activities	Practice Problems	HW Problems
1a	10.1 Lines and Angles. Angles for intersecting and parallel lines (452)	Activities CA-201/1, 2, 3. CA-202/1, 2; Practice (text): 460/1, 3, 4; HW (text): 463/2, 4, 5		
1b	10.1 Angle sum of a triangle.	Activities CA-203/1, 2, 3. CA-204/1. CA-205/3. CA-206/4, 6, 7. CA-207/1 to 4. Practice 461/5, 6, 7. HW: 463/9, 10.		
2a	10.2 Angles and Phenomena in the world (466)	Activities CA-209: Calculating Earth's Circumference. Practice 468/1, 2 HW: 469/1ab, 4a-f, 5 (instructor may expand on the topic of seasons)		
2b	10.3 Circles & Spheres (472)	Practice 475/1, 2, 4. HW: 476/1, 2, 3		
	10.3 The Global Positioning System (GPS)	Activities CA-214. (GPS can be presented as a class demo with strings and/or with diagrams)		
3a	10.4 Triangles, Quadrilaterals and other Polygons: Definitions, Relationships and Venn diagrams (477)	Activities CA-217. CA-218-219. CA-220-221. CA-222 Practice 484/1 to 4. HW: 487/1, 2, 3, 5abc, 8ab, 9, 16ab, 19a, 20ab		
3b	10.6 Constructions with a compass and a straight edge	Activities CA-223/1, 2, 3. CA-224/4, 6, 7. Practice 484/5, 6, 7. HW: 487/5abc, 8ab, 9, 16ab, 19a, 20ab.		
4ab	4a Review	4b. Test 1		
5a	11. Measurement (492)	Activities CA-230/1, 2, 4. CA-231/1, 2, 3.		
	11.1 Concepts of Measurement (493)	Practice 503/1 to 4, 7, 8, 9. HW: 504/1 to 7		
	11.2 Length, Area, Volume & Dimension (505)	Activities CA-232/1, 2. Practice 508/1abc, 2, 3. HW: 509/1, 3, 4, 7		
5b	11.3 Error & Precision in Measurement (510)	Activities CA-233/1ab, 2. Practice 513/1, 2. HW: 513/1, 2, 3		
	11.4 Converting from One Unit of Measurement to Another I (514)	Activities CA-234/1abc, 2. CA-235/1, 2, 3. Practice 518/1 to 4. HW: 521/1 to 6, 8, 9, 10, 11		
	11.4 Converting from One Unit of Measurement to Another II	Activities CA-236/1, 2. CA-237/1 to 5. CA-238/1, 2. Practice 518/5, 6, 7. HW: 521/12, 13, 14, 16, 17, 21, 25		
6a	12.3 Areas of Triangles (535)	Activities CA-246/3, 4. CA-247/1 to 4 Practice 539/2, 4. HW: 542/2, 4, 5, 6, 8, 9, 10, 11, 13		
6b	12.4 Areas of Parallelograms & Other Polygons (544)	Activities CA-248/1, 2. CA-249:12H/1, 2;		

		Practice 546/1, 3. HW: 547/2, 3, 4abcd, 6, 7ab, 8.
7a	12.5 Shearing: Changing Shapes without Changing Area. Cavalieri's Principle (550).	Activities CA-250/12J. CA-251/1, 2, 3. Practice 551/1, 2. HW: 553/1, 2ab, 3ab, 4ab, 5abc, 6
7b	12.6 Areas of Circles and the Number Pi. (554)	Activities CA-252:12L. CA-253:12N. CA-254/1. Practice 558/1, 2, 4, 5 HW: 559/1, 2, 6, 8
8ab	8a. Review 8b. Test 2	
9a	12.9 Pythagorean Theorem; applications and proofs (570).	Activities CA-261:12U. CA-262/1, 4 Practice 560/1, 2, 3, 6 HW: 563/1, 3, 6.
9b	Include the proof with similar right triangles; and President James Garfield's Trapezoidal proof	
	13. Solid Shapes: Their Volume & Surface Area (580)	
	13.1 Polyhedra & Other Solid Shapes (581)	Activities CA-265/1, 2; CA-267. Practice 586/1 to 4. HW: 587/2, 3, 4.
10a	13.2 Patterns & Surface Area (589)	Activities CA-269/13G:1, 2. CA-270/1, 2, 3, 4. Practice 591/7, 8, 9, 10, 11. HW: Cylinder Area: 595/3ab, 13ab; Pyramid Area: 596/11, 12. 583/11, 12; Cone Area: 596/15ab, 16ab, 17, 20
10b	13.3 Volumes of Solid Shapes (597) (refer students to YouTube videos)	Activities CA-275:13N/1, 2, 3. CA-277/2, 3. Practice 603/2 to 7. HW: 604/2ab, 4ab, 5, 7, 8, 12ab, cone: (17*, 18ab, 22, 23ab, 24)
	13.4 Volumes of Submerged Objects (607)	Activities CA-311/1, 2, 3. Practice 608/1, 2ab, 3. HW: 609/1, 2, 3
11a	15. Statistics (673). 15.1 Formulating Statistical Questions, Gathering Data, Using Samples (674)	Activities CA-309/abcde. CA-310/1, 2. Practice 679/1, 2, 3, 4. HW: 680/3, 4, 5, 8, 9
	15.2 Displaying Data and Interpreting Data Displays (681)	Activities CA-314/1 to 6. Practice 690/1, 2, 3 HW: 692/4, 5, 8ab
11b	15.3 The Center of Data: Mean, Median, Mode (693)	Activities CA-321/1. CA-322/2, 3, 4. CA-323/2. CA-325/1, 2ab. 3. CA-333/1, 2 Practice 698/2, 3, 4, 5, 6. HW: 700/2, 4, 5, 7 to 10ab, 13, 14,abc, 17, 20*, 21*.
12a	16. Probability (722) 16.1 Basic Principles of Probability (723)	Activities CA-341/3. CA-342/2, 3. Practice 728/1, 2, 4 HW: 729/1, 2, 3, 4, 7
	16.2 Counting Number of Outcomes (730)	Activities CA-346/1, 3, 4. CA-357/1, 2. Practice 733/1, 2, 3, 4 HW: 735/2, 3ab, 5, 6abc
12b	16.3 Calculating Probabilities in Compound Events (736)	Activities CA-351/16J:1, 2. Practice 739/1abc, 2, 3 HW: 741/1 to 8, 10ab, 12, 13, 16ab
	16.4 Using Fraction Arithmetic to Calculate Probabilities (743)	Activities CA-352/1. CA-354/1, 3c. Practice 747/1, 2, 3* HW: 748/1, 2, 10, 11
13ab	13a. Review; 13b. Test 3	
14ab	14a. Review; 14b. Review	
15	Final Exam	

Written Assignment 1

Name _____ EMPLID _____

Course _____ Date _____

Directions: Upload your completed assignment to Gradescope as a PDF. For full credit, each page of your submission must be right side up and the pages must be in the correct order. If Gradescope asks you to match questions to pages, do so. Many students find it easier to type/annotate directly onto the PDF on the computer; other students prefer to print out the assignment, handwrite their answers, and then use a scanning app to get the completed assignment back onto the computer. If you scan, make sure you scan as a single PDF (with two pages) and make sure you scan as a document, not a picture (completely white background between text).

Question 1.

Is this your first math course at CSI? If not, what math course did you take before this?

Question 2.

What is your preferred email address?

Question 3.

Are you taking this course to satisfy a requirement? Some other reason?

Question 4.

Is there some grade in this course that you will strive to make?